Claims

1. A transdermal therapeutic system comprising an active substance impermeable backing layer, at least one polymer layer with microreservoirs present therein, and at least one active substance, and a protective layer for removal before use, wherein

a) the polymer fraction of the polymer layer consists to the extent of at least 70% by weight, preferably at least 80% by weight, of polysiloxanes,

b) the microreservoirs contain the active substance in dissolved form,

c) the solvent for the active substance consists to the extent of at least 50% by weight, preferably at least 80% by weight, of an ambiphilic, especially dipolar organic solvent, and

d) the ambiphilic solvent is soluble in polysiloxane to the extent of not more than about 20% by weight and is preferably miscible with water at least in a weight ratio of one part of solvent to 3 parts of water.

2. The transdermal therapeutic system as claimed in claim 1, wherein the polysiloxane is amine-resistant.

3. The transdermal therapeutic system as claimed in claim 1 or 2, wherein following production the microreservoirs are essentially free from water.

4. The transdermal therapeutic system as claimed in one or more of claims 1 to 3, wherein the polysiloxane is self-adhesive and if desired comprises at least one filler.

5. The transdermal therapeutic system as claimed in one or more of claims 1 to 4, wherein the microreservoir-containing layer is provided at least with one further self-adhesive layer, which is microreservoir-free, for anchoring on the skin and/or for anchoring with the backing layer.

6. The transdermal therapeutic system as claimed in one or more of claims 1 to 5, wherein the ambiphilic solvent is liquid at room temperature,

judiciously has a boiling point under standard conditions of more than 80°C, in particular more than 110°C, is preferably diethylene glycol monoethyl ether, diethylene glycol dimethyl ether, one of the butanediols, tetrahydrofurfuryl alcohol, dipropylene glycol, propylene glycol or a mixture thereof, and is judiciously soluble to the extent of not more than 20% by weight in n-hexane or n-heptane.

7. The transdermal therapeutic system as claimed in one or more of claims 1 to 7, wherein the boiling point of the dipolar solvent is above that of the solvent for the polysiloxane, judiciously at least 10°C, preferably at least 30°C.

8. The transdermal therapeutic system as claimed in one or more of claims 1 to 7, wherein the maximum size of the microreservoirs does not exceed 80% of the thickness of the polymer layer, the microreservoirs having a diameter of on average 5 - 50 μm, preferably 5 - 30 μm.

9. The transdermal therapeutic system as claimed in one or more of claims 1 to 8, wherein the microreservoirs comprise, in addition to the active substance and the ambiphilic solvent, a crystallization inhibitor, a viscosity-increasing agent and/or a pH regulator.

10. A process for producing polysiloxane films charged with active substance microreservoirs, which comprises dissolving the active substance in an ambiphilic solvent consisting to the extent of at least 50% by weight of dipolar organic solvents, dispersing this solution in a solution of a polysiloxane, coating the resulting dispersion onto an appropriate film, and removing the solvent of the polysiloxane at temperatures of between 25 and 100°C, preferably between 30 and 80°C.